Single ion spectroscopy in preparation of an atomic parity violation measurement in Ra+

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Stellingen

Behorende bij het proefschrift

Single Ion Spectroscopy in Preparation of an Atomic Parity Violation Measurement in Ra^+

van

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1. Good knowledge and control of laser frequencies at the 10 kHz level or better is indispensable for a precise measurement of atomic parity violation. The extraction of a precise value for the Weinberg angle from such a measurement demands the improvement of the current atomic theory.

2. Precise measurements with a single ion require ultra-high vacuum. This condition can be significantly spoiled by small objects with unknown coatings, water molecules or an insect imprisoned in the vacuum chamber.

3. Serendipity can significantly boost the progress in physics.

4. Experimental equipment not always works as expected. Therefore, individual check of the essential parts of any new experiment is indispensable for a credible result.

5. The success of any experiment depends on the balance between planning and executing the plan. Extremely good planning can be disturbed by something as simple as an incompatible screw.

6. The typical salsa dancing classes in the Netherlands are focused on teaching different steps and complicated turns. Latin-American people learn to dance by

listening and feeling the music. This difference creates an additional barrier between the two cultures.

7. Cheering for a national soccer team reduces dramatically the social and political differences among people.

8. In Colombia, illegal drug trade has provided the majority of the financial means for a conflict that has caused severe damage to more than 6 million inhabitants during the last 30 years. A solution to the problem is not facilitated by stereotypes and jokes concerning drugs and Colombian people, as the first mostly are not true and the second are not funny.

9. International student houses help to establish relations between students of different cultures all around the word. Apart from the several advantages of such a multicultural context there is also one disadvantage: people who live in such an environment and study an international program acquired only limited knowledge about Dutch culture even if they have lived for more than one year in the Netherlands. Mixing foreign and Dutch students at residences can diminish such effects.